SONY

*Digital Audio Recorder*

# *PCM-2600*

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## A New Standard in Cost Effective Digital Audio Recording

*Sony has always been a name synonymous with superb DAT recorders. From the industry standard PCM-7000 Series for broadcasting and post-production to the TCD-D10 PROII for high quality location recording, Sony DAT machines have an enviable worldwide reputation for reliability and performance.*

*These same qualities are also inherent in the Sony PCM-2000 Series, a range of cost effective recorders for users who require a fully professional and great sounding DAT machine - but at an affordable price. Now Sony has rewritten the definition of an affordable recorder with a new addition to the PCM-2000 Series, the PCM-2600.*

*The Sony PCM-2600 includes features that have only been found before on high quality, expensive machines - and brings them at a price which is within the reach of almost everyone. It is the only professional recorder in the world to incorporate the patented Sony Super Bit Mapping (SBM) system, making recordings clearer and smoother than ever before.*

### Standard and Long Play Modes

The PCM-2600 conforms to the DAT format. Although only measuring 73x54x10.5mm, DAT cassettes can hold up to two hours of 16-bit linear stereo digital audio data. In the long play mode, the PCM-2600 doubles this recording time by using 12-bit non-linear digital recording with a 32kHz sampling frequency.

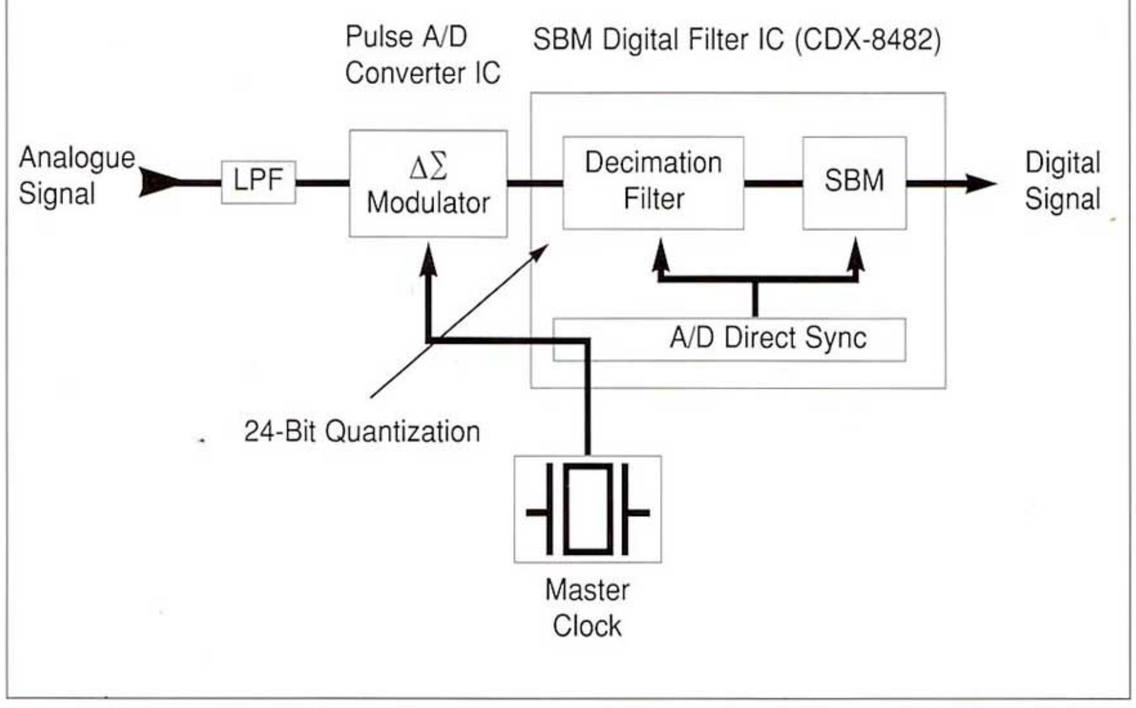
### Superb Sound Quality

Incorporating a high density linear converter system, a $\Delta\Sigma$ type A/D converter features superb linearity for outstanding recording quality. On playback, the PCM-2600 employs a Pulse D/A converter for low noise and low distortion.

### Super Bit Mapping

The analogue line inputs include SBM circuitry which can be switched in to process the digital signal prior to recording. The acclaimed Sony SBM system allows signals with an apparent resolution of greater then 16 bits to be recorded on a standard tape. The decimation filter of the SBM circuit gives the A/D converter a 24-bit quantization resolution, which is then processed using SBM. This allows much of the added

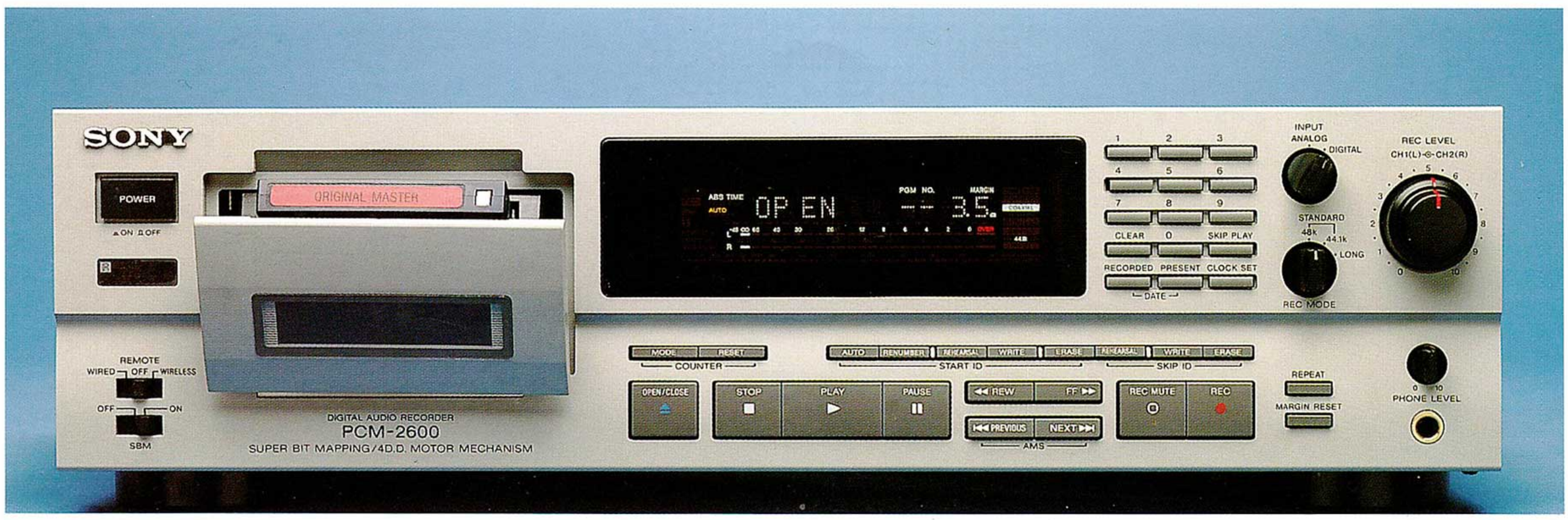
**High density linear A/D converter system**




information present in the 24-bit signal to be encoded into the standard 16-bit format and gives recordings made on the PCM-2600 added clarity and depth. Tapes recorded using SBM are fully compatible with the standard DAT recording format, and will sound superior when replayed on any DAT machine.

### Three Alternative Sampling Frequencies

At normal tape speed, the PCM-2600 can operate at a sampling frequency of either 44.1kHz or 48kHz via the analogue or digital inputs. When recording and playing back in the long play mode, audio data is sampled at 32kHz.

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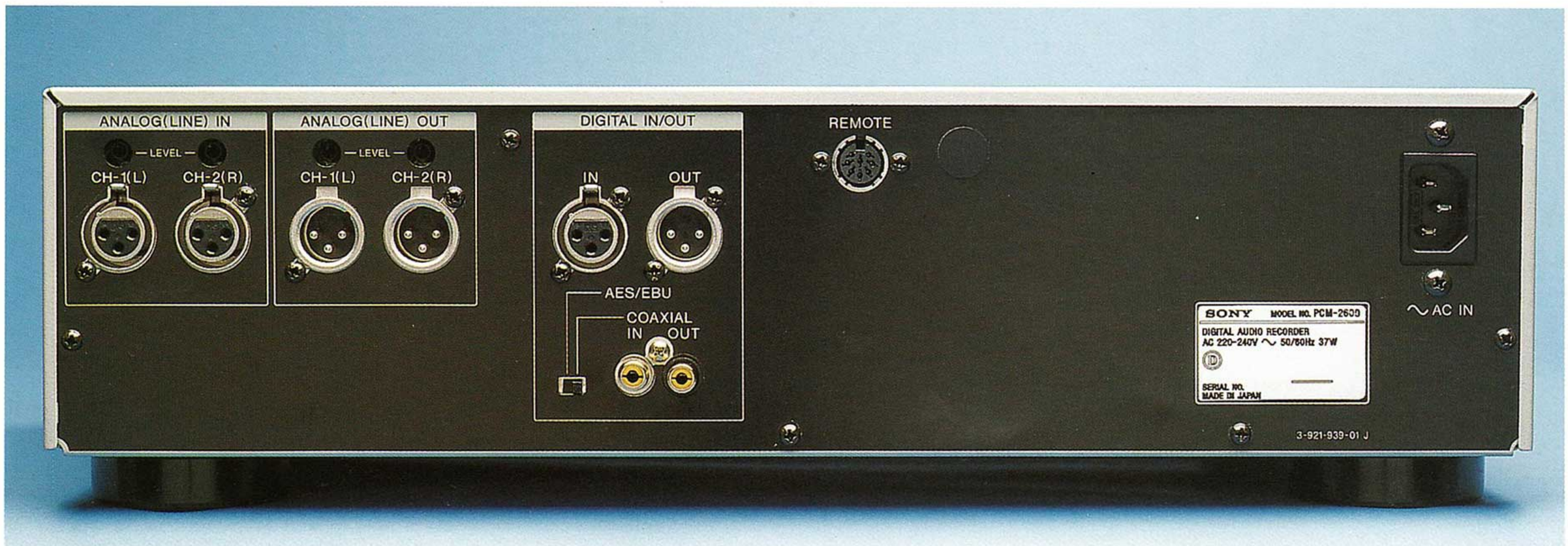



## Powerful Error Correction

Double encoded Reed Solomon Code is employed for error correction. This allows the PCM-2600 to detect and correct both random and burst errors for faithful reproduction of a recording.

## Flexible Interfacing

The PCM-2600 features both a standard AES/EBU digital interface and an IEC 958 Type II interface to provide trouble free digital connection with almost any digital equipment, including the Sony CDP-2700 CD player or another PCM-2600. Balanced analogue inputs can be adjusted over the range of -12dBu to +4dBu and the analogue output provides up to +24dBm, making the recorder ideal for connection to many other types of audio equipment.

## Absolute Time (A-Time) Recording

Absolute time can be recorded in the subcode area of DAT tape so that when recording consecutive audio segments, continuity of absolute time across these segments is assured.

A DAT tape recorded with absolute time is ideal material for electronic editing with the PCM-7000 Series DAT editing system, as this translates A-Time into SMPTE/EBU time code.

## Easy-to-Read Information Display

A large Fluorescent tube-Luminescent (FL) display on the front panel provides a variety of time information, including a linear counter (tape running time), tape remaining time, programme time data, recorded time and absolute time.

The PCM-2600 has an easy-to-read 23-segment peak level meter display with 0.5dB steps and peak margin indication.

## Reliable Transport Mechanism

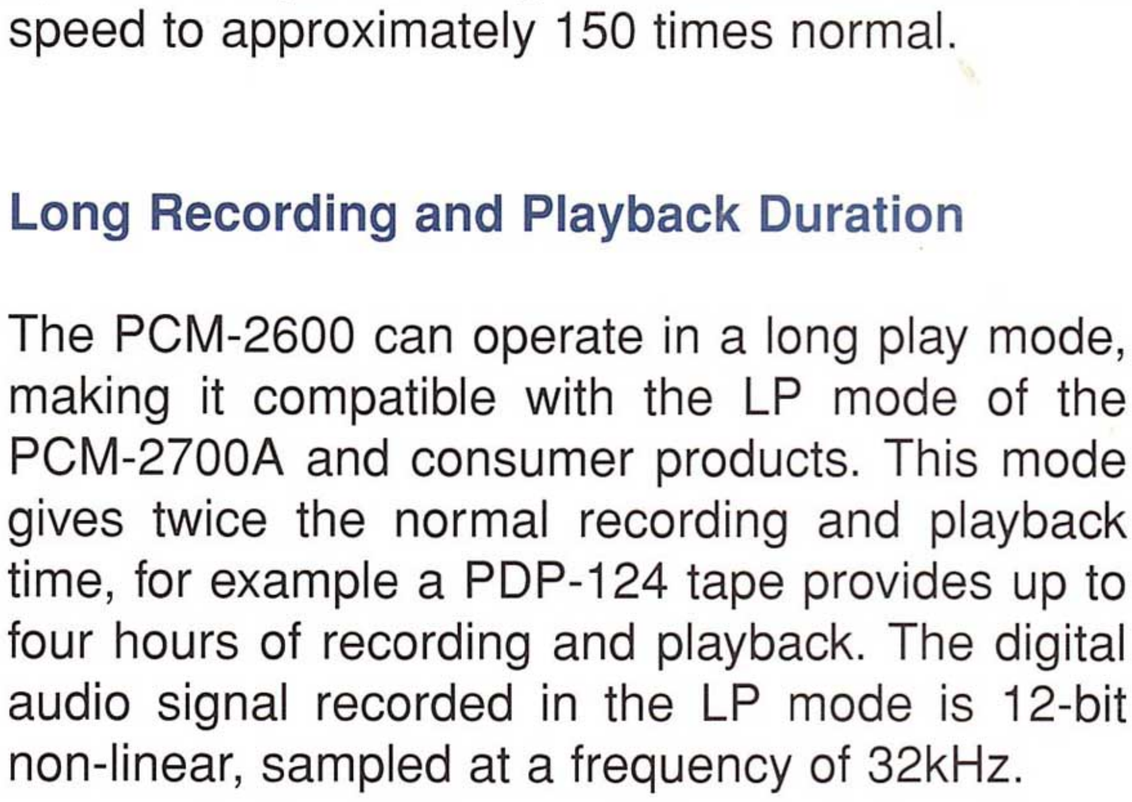
The tape transport is based on an advanced design, with four, independent servo-controlled motors for the head drum, capstan, and tape reels. This mechanism provides stable and precise tape transport.

## Software Controlled Servo

The servo system is completely controlled by carefully programmed software. This provides sophisticated, smooth, transport control which optimizes tape handling and increases the search speed to approximately 150 times normal.

## Long Recording and Playback Duration

The PCM-2600 can operate in a long play mode, making it compatible with the LP mode of the PCM-2700A and consumer products. This mode gives twice the normal recording and playback time, for example a PDP-124 tape provides up to four hours of recording and playback. The digital audio signal recorded in the LP mode is 12-bit non-linear, sampled at a frequency of 32kHz.

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## Remote Control Facilities

A wireless remote control unit, the RM-D868, is supplied for remote operation of all PCM-2600 functions.

Control from other sources - including a fader start facility - is easily catered for via an 8-pin parallel remote port. This port is switchable between record and playback modes and gives full control of all appropriate transport functions.

## Alternative Subcode Recording

Various subcodes can be recorded separately from the digital audio data, providing tape search functions. The subcodes include start ID, skip ID, programme numbers, absolute time and date function. The programme numbers can be recorded sequentially as the start IDs are written, and can be renumbered in the correct sequence whenever additional start IDs are inserted.

While recording, the PCM-2600 can also automatically insert start IDs when a signal is detected, allowing easy identification of audio segments. This facility is available whether recording via the analogue or the digital inputs.

## Date Function

A built-in crystal clock provides a date function, automatically indexing each recording with time and date information (minute/hour/day/day of the week/month/year). When a tape is replayed, this feature provides an easy check on when the recording was made.

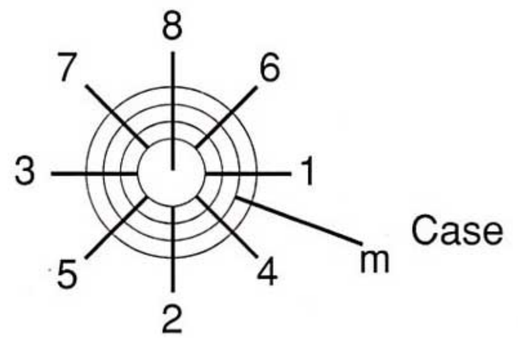
## 19-inch Rack Mountable

With its supplied rack mounting kit, a PCM-2600 can be installed in a EIA standard 19-inch rack.

*Infra-red remote control unit RM-D868*

**Wired Remote Control Function**

8-pin Din Connector




| Pin No. \ Mode | | Playback | Record |
|---|---|---|---|
| Commands | 1 | Open | Ground |
| | 2 | Stop/Play | Start ID |
| | 3 | □ | □ |
| | 4 | ▷ | ▷ |
| | 5 | ◁◁ | ▯▯ |
| | 6 | ▷▷ | ○ |
| Tallies | 7 | Stop | Record Pause |
| | 8 | Play | Record |

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# SPECIFICATIONS

## Recording section

| | |
|---|---|
| Tape: | digital audio tape |
| Recording head: | rotary head |
| Recording time: (PDP-124) | standard, 120 min<br>long play, 240 min |
| Tape speed: | standard, 8.15mm/s<br>long play, 4.075mm/s |
| Drum rotation: | standard, 2000r/min<br>long play, 1000r/min |
| Error correction: | double-encoded Reed Solomon code |

## Tape section

| | |
|---|---|
| Track pitch: | 13.6µm (20.4µm) |
| Sampling frequency: | 48kHz, 44.1kHz, 32kHz |
| Modulation system: | 8-10 modulation |
| Transfer rate: | 2.45 Mb/s |
| Channels: | 2 channels, stereo |
| Quantization: | standard, 16-bit linear<br>long play, 12-bit non-linear |

## Inputs

| | |
|---|---|
| Analogue: | -12 to +4dBu (factory setting +4dBu)<br>XLR 3-pin female, 10kohms balanced |
| AES/EBU: | XLR 3-pin female, 110ohms balanced |
| IEC 958 Type II: | 0.5Vp-p, phono, 75ohms |

## Outputs

| | |
|---|---|
| Analogue: | Max +24dBu (factory setting +4dBu) XLR 3-pin male, output impedance 150ohms balanced, load impedance 10kohms |
| AES/EBU: | XLR 3-pin male, output impedance 20ohms balanced, load impedance 110ohms |
| IEC 958 Type II: | 0.5Vp-p, phono, output impedance 75ohms, load impedance 75ohms |
| Headphones: | 0.18mW, stereo jack, output impedance 100ohms, load impedance 32ohms |
| Remote control: | DIN connector, 8-pin parallel |

## Audio performance

| | |
|---|---|
| Frequency response: | standard, 20Hz - 20kHz ±0.5dB<br>long play, 20Hz - 14.5kHz ±0.5dB |
| Signal noise ratio: | 90dB or more (20kHz LPF, A-weight filter On) |
| THD (at 1kHz ref level, 20kHz LPF, SBM function Off): | standard, 0.05% or less<br>long play, 0.3% or less |
| Wow and flutter: | below measurable limit |

## General

| | |
|---|---|
| Power requirements: | AC 120V 60Hz (USA/Can)<br>AC 220-240V 50/60Hz (Europe) |
| Power consumption: | 35W (USA/Can)<br>37W (Europe) |
| Weight: | 6.2kg |
| Dimensions: | 430(W)x125(H)x350(D)mm |

## Supplied remote commander (RM-D868)

| | |
|---|---|
| System: | infra-red |
| Power requirements: | DC 3V (AA/R6 battery x2) |
| Weight: | 100g (with batteries) |
| Dimensions: | 45(W)x185(H)x20(D)mm |

## Supplied Accessories

| | |
|---|---|
| Remote commander RM-D868 | Screws (M5x12) x4 |
| AC power cord | Self-tapping screws (3x8mm) x2 |
| AA/R6 batteries x6 | Decorative washers x4 |
| Rack mount adaptors | Operating manual |
| Sealing panel | |

*Design and specification subject to change without notice*

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